



REPLACEMENT SHEET

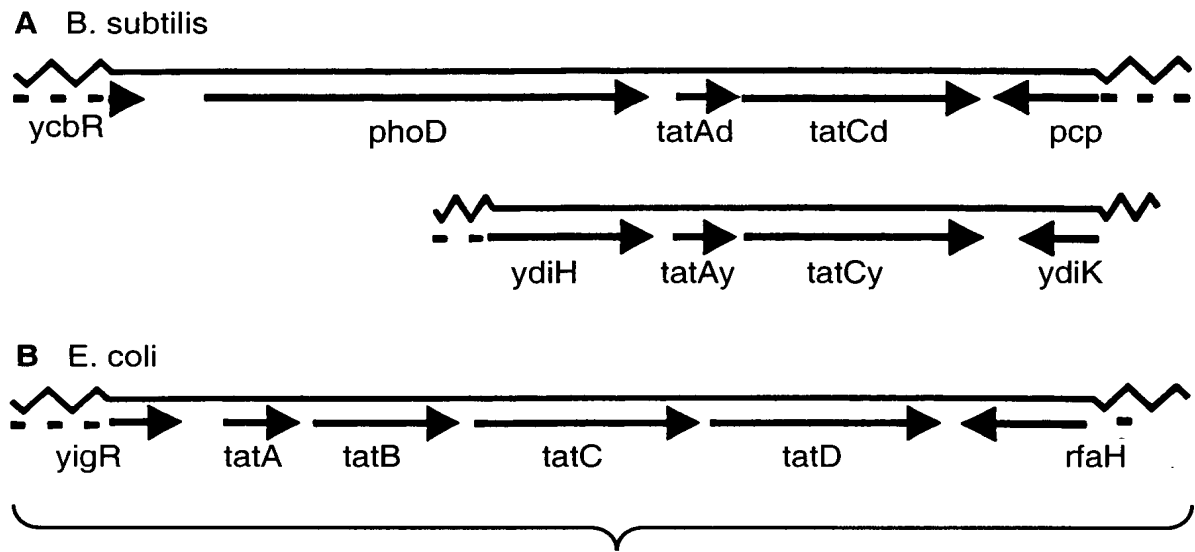
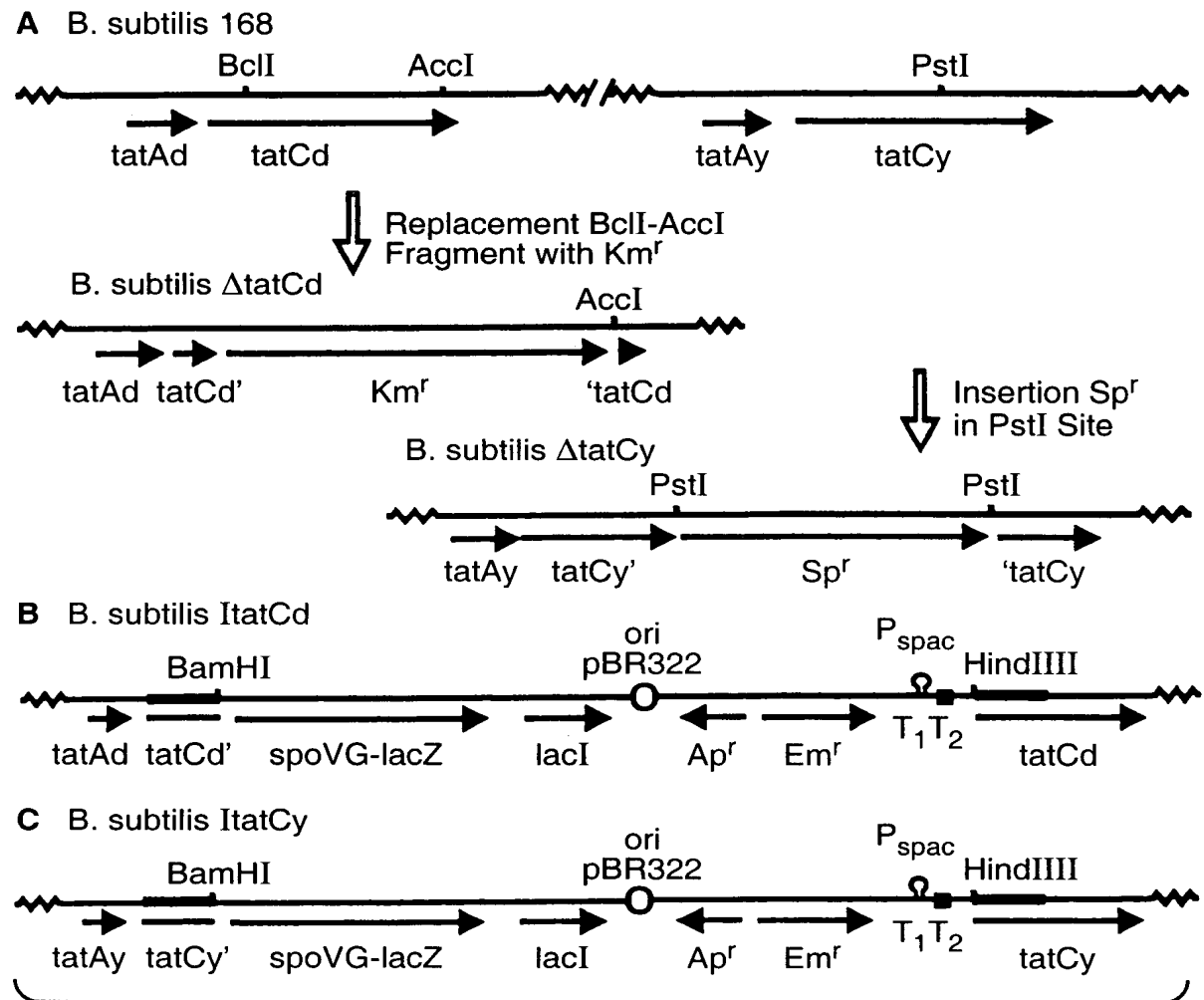
1 / 11

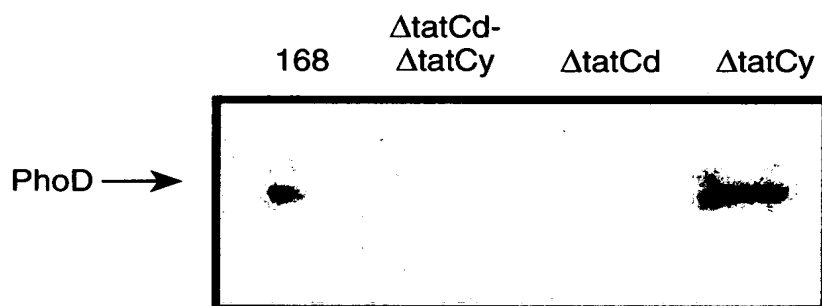
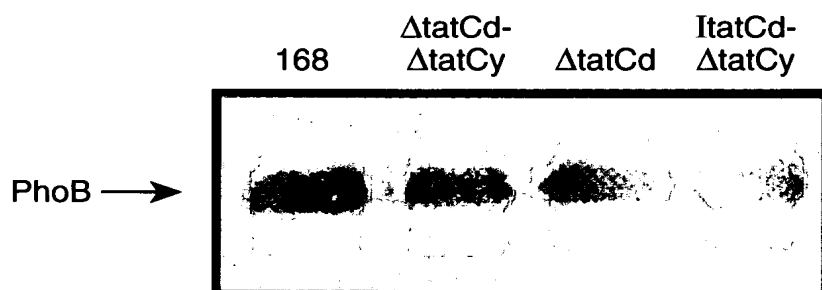
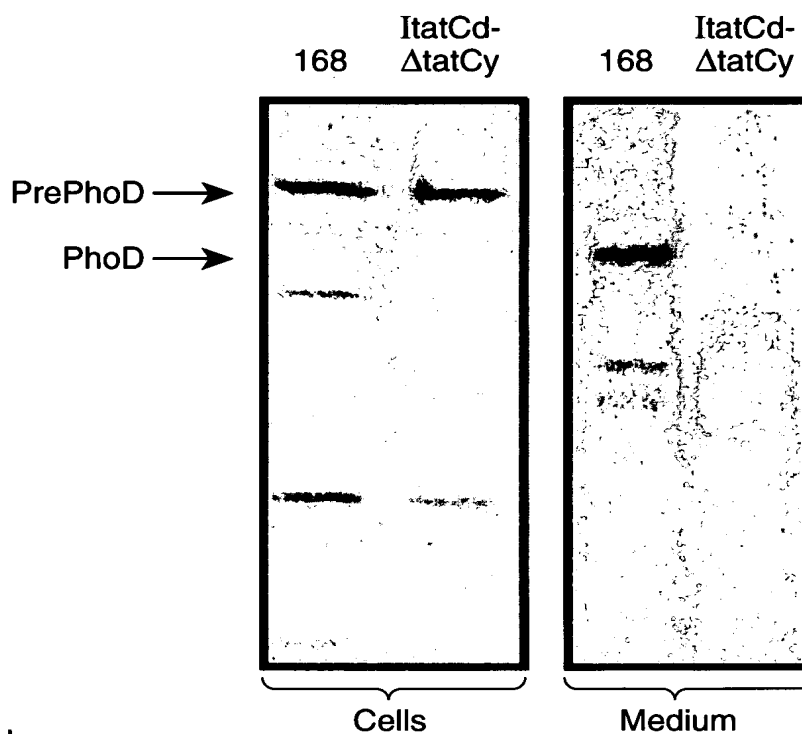
TatA (Eco)	M- <u>GGISIWQLLIIAVIVVLLFGTKKLG</u> -----	26
TatE (Eco)	M- <u>GEISITKLLVVAALVLLFGTKKLR</u> -----	26
TatAy (Bsu)	<u>M</u> - <u>PIPGSLAVIAIAVALIIFGPKKLP</u> -----	25
TatAd (Bsu)	MFSNIGIPGLILIFVIAIIIFGPKSLP-----	27
TatAc (Bsu)	<u>M</u> - <u>ELSFTRKILVILFVGFLVFGPKDKLP</u> -----	25
TatB (Eco)	<u>ME</u> - <u>DIGFSELLLVFIIGLVVLGP</u> <u>QRLP</u> VAVKTVAGWIRALRSLATTVQNELTQELKLQ	49
	* *	
TatA (Eco)	-----SIGSDLGASIKGFKKAMSDDE----PKQDKTSQDADFTAKTI	64
TatE (Eco)	-----TLGGDLGAAIKGFKKAMNDDD----A-AAKKGADVLDQAEL	63
TatAy (Bsu)	-----ELGKAAGDTLREFKNATKGLT----SDEEEKKKEDQ-----	57
TatAd (Bsu)	-----EIGRAAKRTLLEFKSATKSLV----SGDEKEEKSAELTAVK-	64
TatAc (Bsu)	-----ALGRAAGKALSEFKQATSGLT----QDIRKNDSN-----K-	57
TatB (Eco)	EFQDSLKKVEKASLTNLTPELKASMDLROAAESMKRSYVANDPEKASDEAHTIHP	114
 *	
TatA (Eco)	ADKQADTNQE-----QAKTEDAKRHDKEQV	89
TatE (Eco)	SHKE-----	67
TatAy (Bsu)	-----	57
TatAd (Bsu)	-----QDKNAG	70
TatAc (Bsu)	-----EDKQM-	62
TatB (Eco)	VVKDNEAAHEGVTPAAAQTOASSPEQKPEPTPEPVVKPAADAEPKTAAPSPSSSDKP	171

FIG. 1A

TatC (Eco)	MSVEDTQ--PLITHLIELRK <u>RL</u> LLNCIIAVIVIFLCLVYFANDIYH-LVSAPLIK	51
TatCy (Bsu)	MTRMKVNQMSLLEHIAELRK <u>RL</u> LLIVALAFVVF ^{FI} AGFFLAKPIIVYLQETDEAK	50
TatCd (Bsu)	MDKKETH---LIGHLEELRRRIIVTLAAFFLFLITAF ^{LV} QDIYDWLIRDLDGK	51
	*. ... *... *... *... *... *	
TatC (Eco)	QLPQGSTMATDVASPF ^{FT} <u>IK</u> LT ^{FM} VSILSAPVILYQVWAFIAPALYKHERR	105
TatCy (Bsu)	QL----TLNAFNLTDP ^{LY} VFMQFAFIIGIVLTSPVILYQLWAFVSPGLYEKERK	104
TatCd (Bsu)	-----LAVLGPSEILWVYMMLSGICAIAASIPVAIAYQLWRFVAPALTKTERK	98
 ** **.* *... * . **.	
TatC (Eco)	LVVPLL ^V ---SSSL ^{LF} YIGMAFAYFVFPLAFGLANTAPE-GVQVSTD ^{IA} SYL	155
TatCy (Bsu)	VTLSYI---PVSILLFLAGLSFSYI ^{LF} PFVVD ^{FM} KRISQDLNVNQVIGINEYF	155
TatCd (Bsu)	VTIMYIMYIPGLFALFLAGISFGYFVL ^{FP} IVLSFLTHLSSG-HFETMFTADRYF	151
 ** *... *... *... *... *	
TatC (Eco)	<u>SF</u> VMALFMAFGVSFEV ^{PA} IVLLCWMGITSPEDLRKKR ^{PY} VLVGAFVVGMLLT ^P	209
TatCy (Bsu)	H ^{FL} LLQLTIPFGLLFQMPVILMFL ^{TR} LGIVTPMFLAKIRKYAYFTLLVIAALIT ^P	209
TatCd (Bsu)	R ^{FM} VNLSLPFGFLFEMPLVVMFL ^{TR} LGILN ^{PY} RLAKARKLSYFLLIVVSILIT ^P	205
	*... *... *... *... *... *... *	
TatC (Eco)	PDVFSQ ^{TL} LLAIPMYCLFEIGVFFS ^{RF} -YV ^{GK} GRNREEENDAEAESEKTEE	258
TatCy (Bsu)	PELLS ^{HM} MTVP ^{LL} LILYEISILISKAYRKAQKSSAADRDVSSG-----Q	254
TatCd (Bsu)	PDFIS ^{DF} LVMIPLLVLF ^{EV} SVTL ^{SA} FVYKKRMRE-----ETAAA-----A	245
	*. *. . . *. *... * *	

FIG. 1B

**FIG. 2****FIG. 3**

**FIG. 4A****FIG. 4B****FIG. 4C**

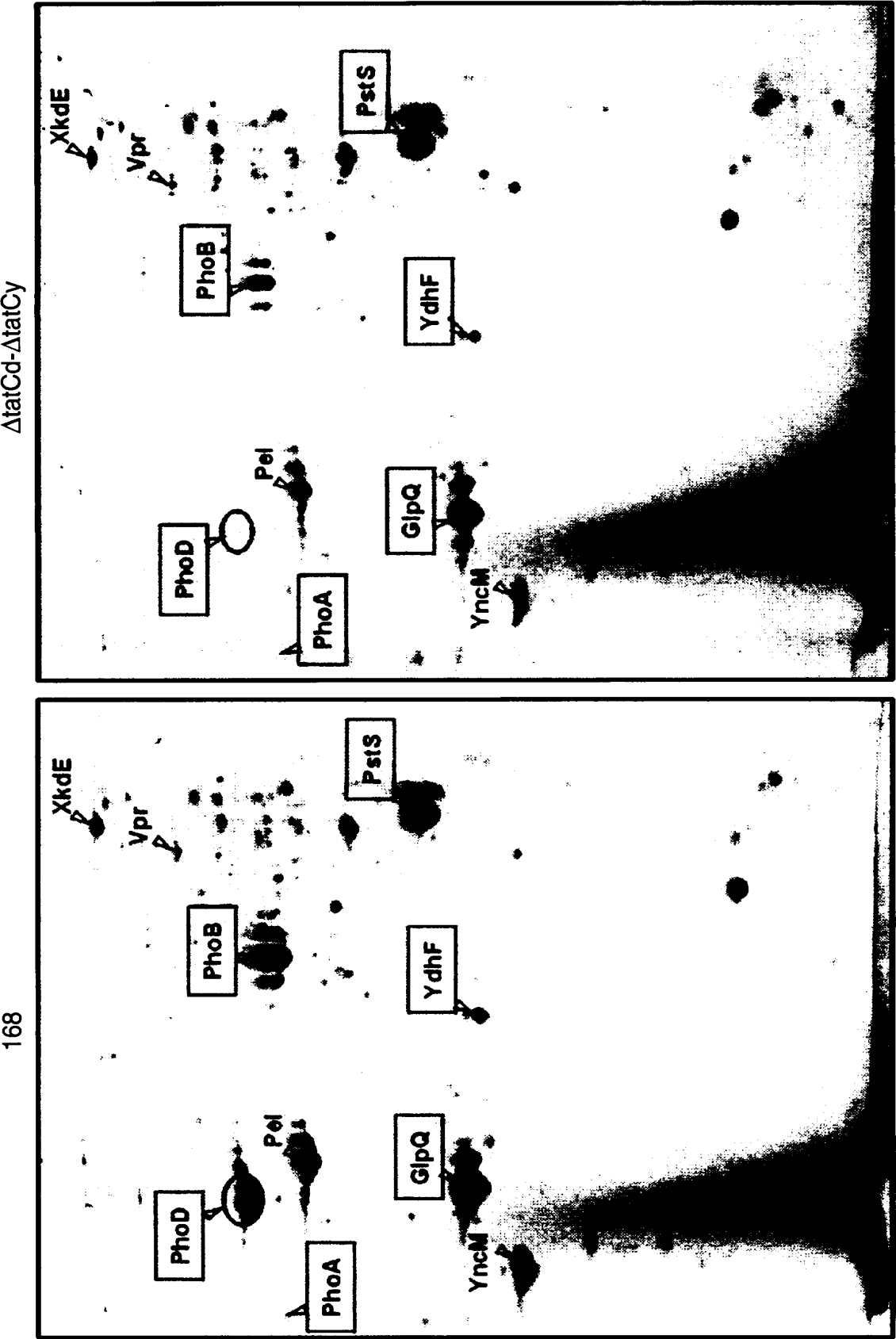
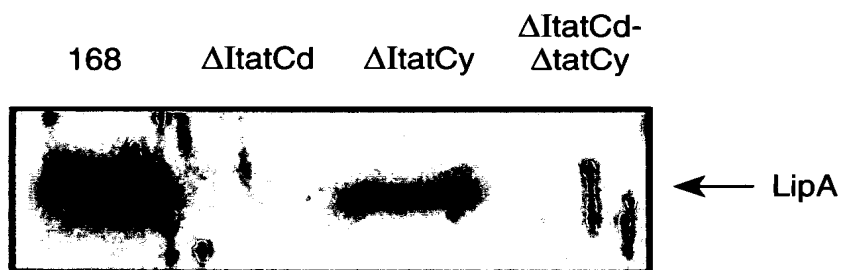
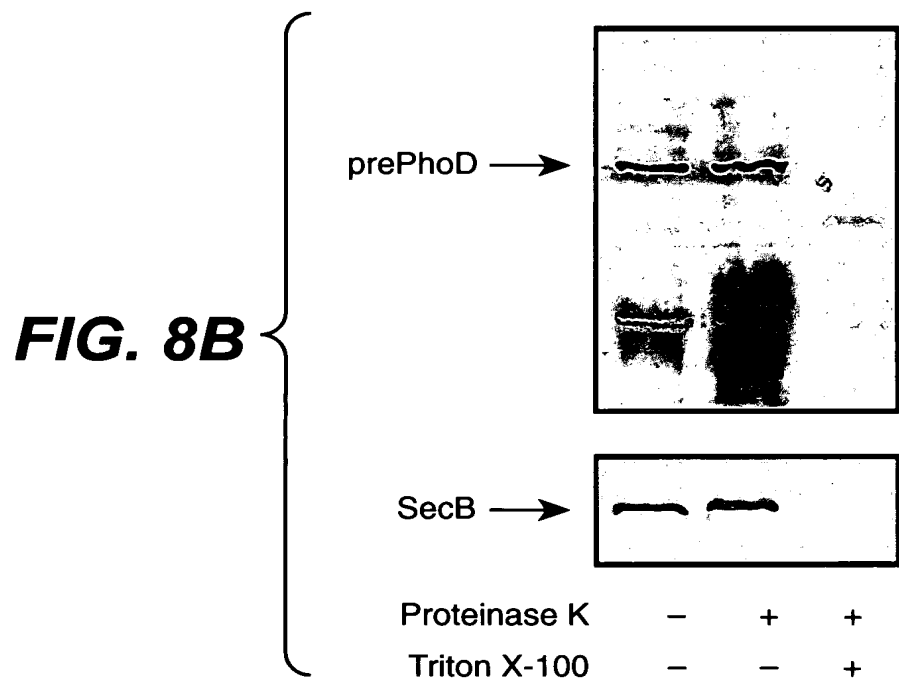
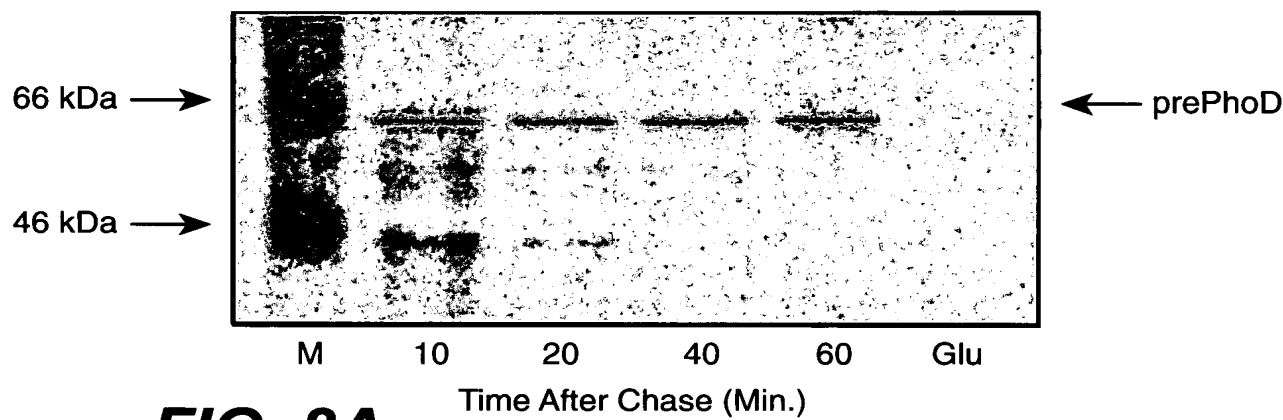


FIG. 5

**FIG. 6**

Protein	N	h	RR-Motif	H	h	C
AlbB	1	0.1	RRILL	27	2.0	AIA
AmyX TM	9	-0.8	RRSFE	15	1.1	-
AppB TM	8	0.5	RRTLm	19	2.3	-
LipA	7	-1.1	RRIIA	19	1.2	AKA
OppB TM	8	-0.6	RRLVY	24	2.0	-
PbpX	2	-2.2	RRRKL	14	2.9	WNA
PhoD	3	-1.3	RRKFI	17	0.9	VGA
QcrA TM	1	-1.1	RRQFL	19	1.3	-
TlpA TM	1	-0.8	RRLII	21	2.4	-
WapA ^W	1	-3.0	RRNFK	18	2.3	VLA
WprA	8	-1.7	RRKFS	20	1.9	AAA
YceA TM	1	-0.4	RR AFL	21	2.2	-
YesM TM	1	-1.5	RRMKI	20	2.4	QYA
YesW	1	-1.3	RRSCL	19	2.0	VKA
YfkN TM	1	-1.2	RRTHV	17	1.7	IHA
YkpC	8	-1.0	RRVAI	17	2.3	SLA
YkuE	1	-1.3	RRQFL	17	1.0	GYA
YmaC	7	0.0	RRFLL	15	2.4	YSL
YubF TM	9	-2.7	RRNTV	23	2.0	-
YuiC	8	0.2	RRLLM	20	1.9	IEA
YvhJ TM	2	-1.7	RRKIL	18	2.5	-
YwbN	1	-1.8	RRDIL	23	1.4	QTA

FIG. 7



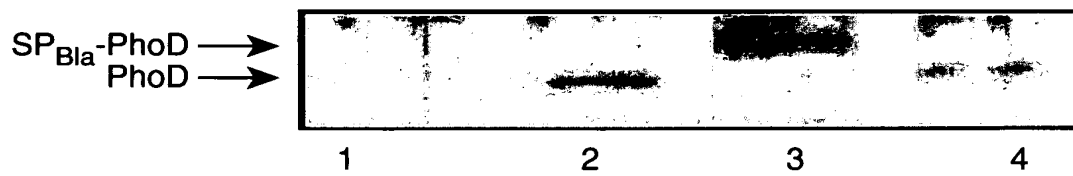


FIG. 9A

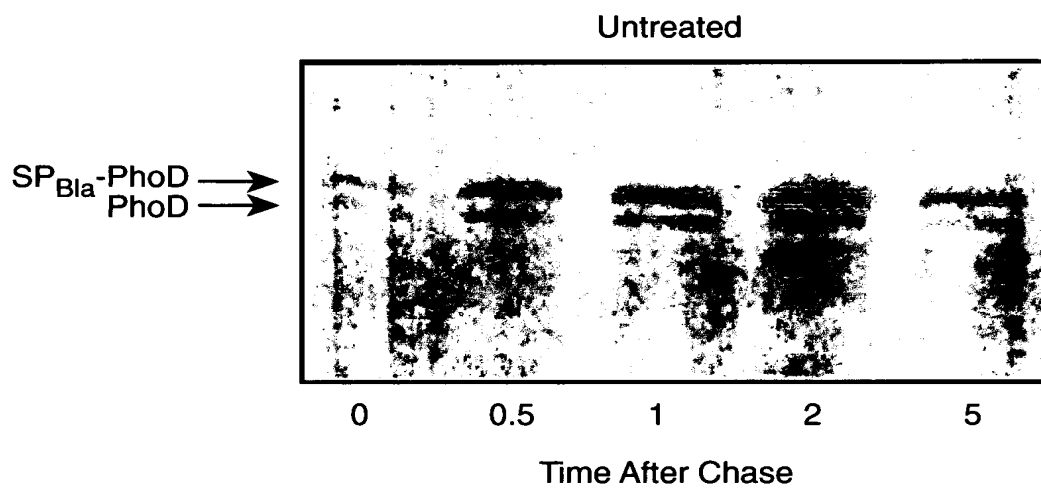


FIG. 9B

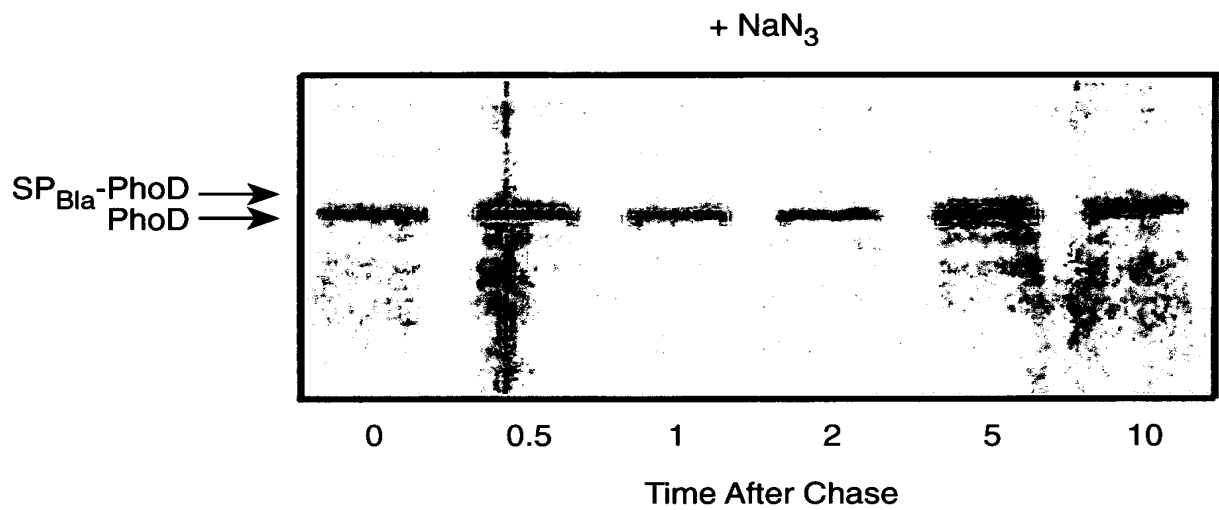
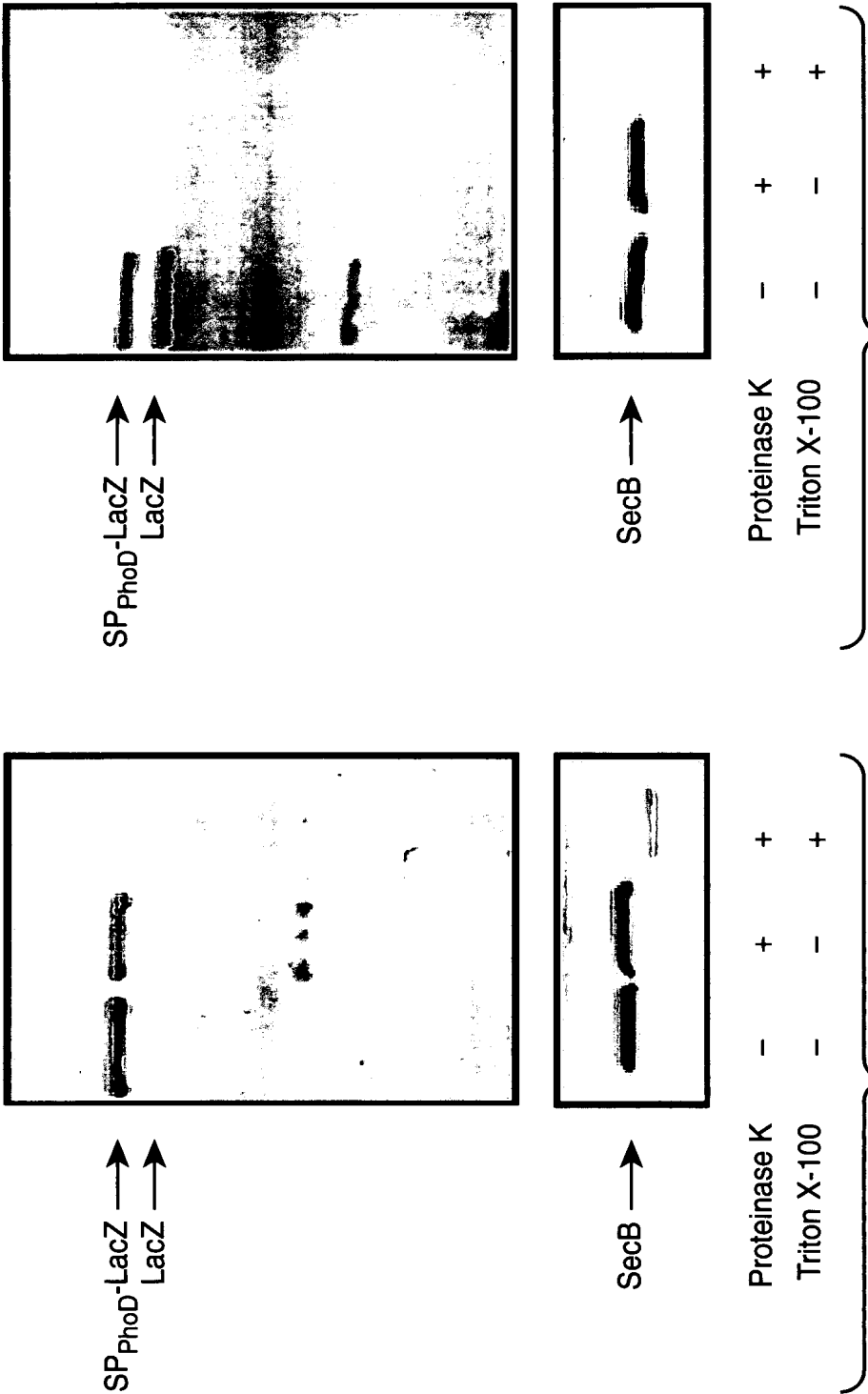


FIG. 9C



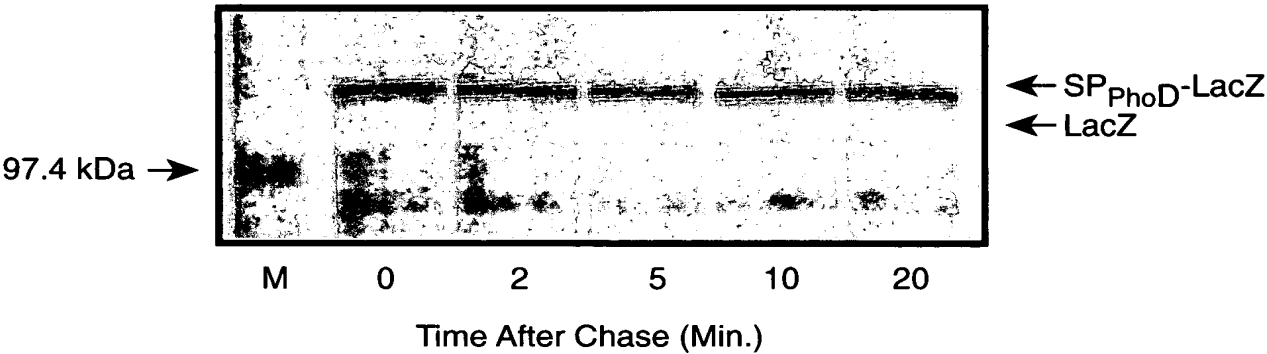


FIG. 11A

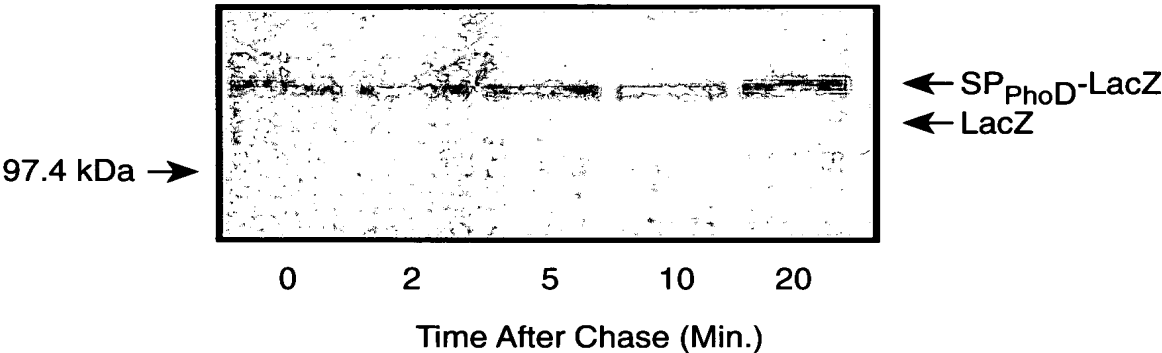
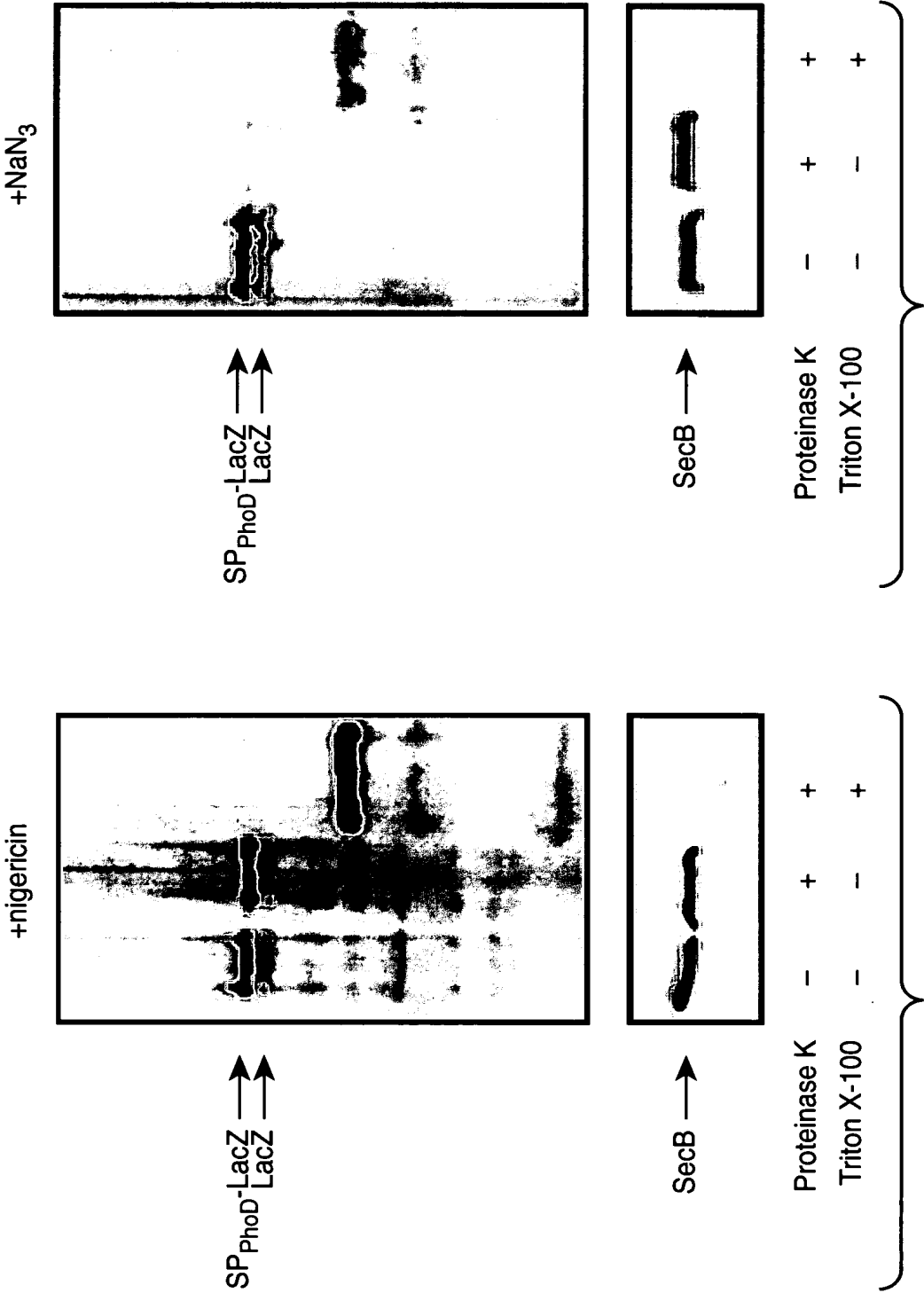
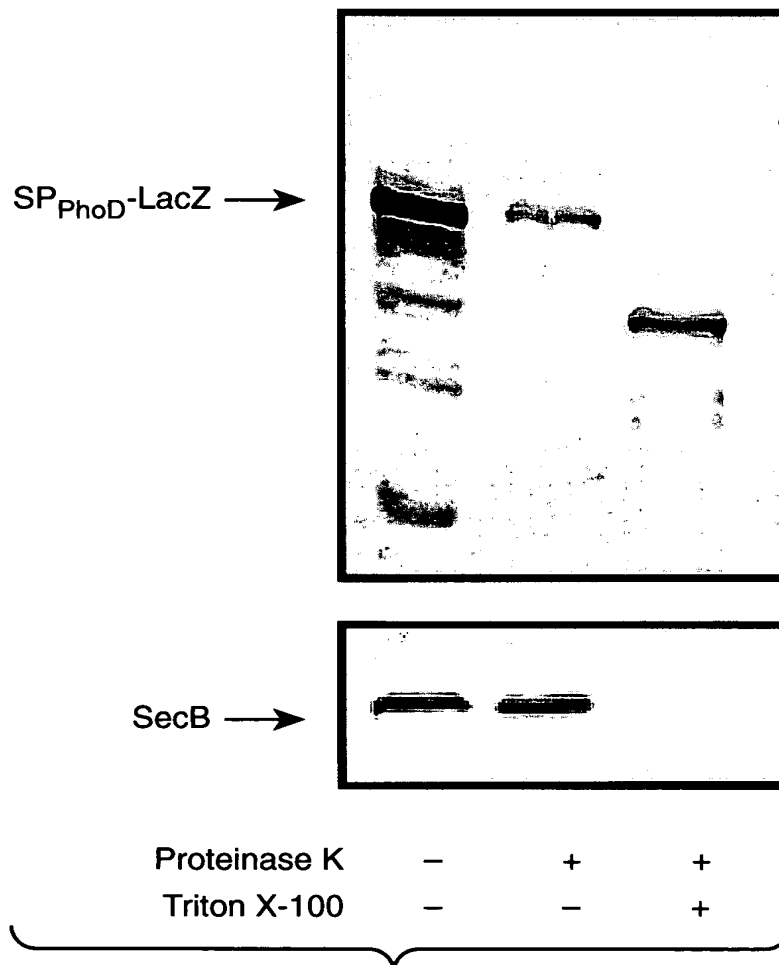


FIG. 11B



**FIG. 13**

Homologs in *B. alcalophilus*

TatA

MGGLSVGSVVLIALVALLIFGPKKLPELGKAAGSTLREFKNATK
GLADDDDDTKSTNVQKEKA

TatC

MTMMTPNQQTSKKKKRKGRKGRVPMQDMSIMDHAEELRRRIF
VVLAF FIVALIGGFFLAVPVITFLQNSPQAADMPFNAFRLTDPLRV
YMNFAVITALVLIIPVILYQLWAFVSPGLKENEQKATLAYIPIAFL
LFLAGIAFSYFILLPFVISFMGQMADRLEINEMYGINEYFSFLFQL
TIPFGLLFQLPVVVMFLTRLGVVTPPTFLRKIRKYAYFALLVIAGII
TPPELTSHLFVTVPMLILYEISITISAITYRKYHGTTHNGQESAK

FIG. 14